CLAIMS:

1. A method of connecting together two sections of tubing comprising the steps of:

placing the two tubing sections in opposed, end-to-end relation so that axially facing surfaces of the tube sections at the ends are free from exposure to the surrounding environment; and then

directing an electromagnetic beam generally toward the location where the axially facing surfaces are in opposed, end-to-end relation for welding the two sections of tubing together at the location.

2. A method as set forth in claim 1 wherein during the step of placing the two tubing sections in opposed, end-to-end relation, the temperature of each of the tubing sections at the axial surfaces thereof is below the melting temperature of material forming the tubing section.

3. A method as set forth in claim 1 further comprising providing material for absorbing energy from the electromagnetic beam at the ends of the tubing sections where connection is to occur for use in fusing the tubing sections together.

4. A method as set forth in claim 3 wherein said step of providing material for absorbing energy comprises positioning a sheet of material between the axial surfaces at the ends of the tubing sections, the sheet being formed of a material which absorbs the energy of the electromagnetic beam.

5. A method as set forth in claim 4 wherein the tubing sections are formed of a material which is substantially transparent to the electromagnetic beam.

6. A method as set forth in claim 3 further comprising, following the step of directing an electromagnetic beam, the step of moving the tubing sections toward each other causing some material of the tubing sections to flow radially outwardly.

7. A method as set forth in claim 3 wherein the step of providing an absorbing material comprises applying a dye to the axially facing surface of at least one of the tubing sections, the dye being selected to increase absorption of energy from the electromagnetic beam to promote fusion of the tubing sections at the axially facing surfaces.

8. A method as set forth in claim 7 wherein the step of placing the two tubing sections in opposed, end-to-end relation includes bringing the axially facing surfaces of the tubing sections into engagement with each other.

9. A method as set forth in claim 3 further comprising, prior to the step of placing the two tubing sections in opposed, end-to-end relation, the step of positioning the two tubing sections in substantially coaxial position and cutting off end portions of the tubing sections.

10. A method as set forth in claim 9 further comprising clamping cut end margins of the two tubing sections closed.

11. A method as set forth in claim 10 further comprising welding each of the closed cut end margins to seal interior passages of the tubing section.

12. A method as set forth in claim 11 wherein the step of welding each of the closed cut end margins comprises directing a beam of electromagnetic radiation

onto a weld block in contact with the closed cut end margin, the weld block absorbing energy from the electromagnetic beam and transferring heat to the tubing section with which it is in contact.

13. A method as set forth in claim 11 further comprising, following the step of directing an electromagnetic beam, the step of reopening the closed end margins of the joined tubing sections by squeezing the tubing sections.

14. A method as set forth in claim 13 further comprising, following the step of directing an electromagnetic beam and prior to the step of reopening the closed end margins, the step of shipping the connected tubing sections to a remote location.

15. A method as set forth in claim 11 wherein all of the steps are carried out with the tubing sections in said substantially coaxial position.

16. A method as set forth in claim 1 further comprising, following the step of directing an electromagnetic beam, the step of moving the tubing sections toward each other causing some material of the tubing sections to flow radially outwardly.

17. A method as set forth in claim 1 wherein the step of directing an electromagnetic beam comprises directing a laser beam toward the location where the axially facing surfaces are in opposed, end-to-end relation.

18. A method of heating a section of tubing comprising:

placing a portion of the tubing section to be heated in contact with an energy absorption member;

directing a beam of electromagnetic energy onto the energy absorption member, the energy absorption member being constructed for absorbing energy from the beam;

transferring heat from the energy absorption member to the tubing section portion by contact therewith to melt the tubing section portion.

19. A method as set forth in claim 18 wherein the energy absorption member has low thermal conductivity.

20. A method as set forth in claim 19 wherein the energy absorption member comprises a weld block.

21. A method as set forth in claim 20 wherein the weld block is made of one of polytetrafluoroethylene and glass.

22. A method as set forth in claim 18 wherein the energy absorption member comprises a film.